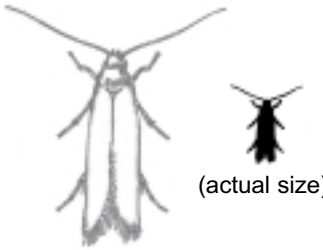
Managing Clothes Moth Infestations

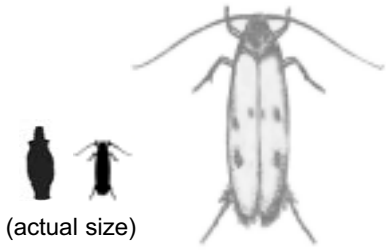
There are two clothes moths which commonly occur in Los Angeles County. Although the moths do not consume any material during their adult life, the larvae feed extensively on a variety of household items and can do considerable damage.

The webbing clothes moth (*Tineola bisselliella*) is worldwide in distribution and is often referred to as the most common clothes moth in the United States. When at rest, the adult moth has a length of 7-8 mm, the wings are a pale golden color without markings, and the head bears a fluffy fringe of copper-colored hairs.

The casemaking clothes moth (*Tinea pellionella*) is about 6 mm in length when the wings are folded, and has a brownish hue. There are three dark spots on the wings, but the markings may become indistinct as the moth ages. This moth is not as economically important as the webbing clothes moth in most areas of the United States, but an increased incidence of infestations in Los Angeles County suggests it may soon become a serious pest. This enhanced presence may be a consequence of the heightened importation of woolen goods from abroad.



The webbing clothes moth has wings that appear to be a pale golden color without markings.



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The adult moths of both species are not strong flyers and are adverse to bright light; instead, they prefer to remain in dark or dimly lit areas and are frequently overlooked during routine cleaning activities. When infested fabrics are disturbed, the moths often attempt to escape by running rather than flying. Although it may be difficult to distinguish between the adults of the two species, the distinctive behavior of the larvae will provide the clues for proper identification.

The webbing clothes moth larvae prefer woolen articles, but will feed on hair, fur, feathers and similar animal products. They frequently spin a flat mat of silken webbing, or construct a loose, silken tube and then feed from beneath this protective covering of silk. The larvae will weave small fibers from the food material among the silken strands, making the webbing difficult to detect. The fairly large fecal pellets often accumulate beneath this silken mat. Since the dyes of various materials are often unaffected by the digestive process, the pellets are frequently the same color as the material upon which the larvae are feeding. The larvae deposit their silk in the folds or weaves of tapestries, beneath rugs, in the areas of clothing beneath cuffs and collars, or between garments when they are hung too close together or tightly packed into closets. When larvae feed on the underside of carpeting, the silken tubes may extend along the flooring and in the cracks. It is this extensive spinning activity which characterizes an infestation by this moth. Woolens damaged by this species frequently exhibit furrows on the surface of the material, caused by the “grazing” feeding behavior of the larvae. In heavy infestations, the woolens will have long, irregular holes in the material.

The casemaking clothes moth larvae will feed on wool clothing, carpets and tapestries, producing damage that appears as small holes with webbing. They also feed on felt and hemp, have been found in dried carcasses or taxidermy mounts, and will readily feed on hair, feathers, furs, and lint. The most distinguishing characteristic of this species is the portable case constructed by the larvae which they occupy and carry with them. This case, which is approximately 6 to 9 mm in length, is constructed of silk and fibers of the food material and debris from the immediate area. The case may be difficult to see because it is the same color as the item upon which the larva is feeding. The protective case is open at both ends and the larva can turn within the case and feed from either end.

The most common site of infestation by the casemaking clothes moth larvae in Los Angeles County is beneath baseboards in laundry rooms or other areas where lint, dander, and hair accumulate. They construct their cases of lint and small dirt particles, which gives the uniquely shaped grey or brown cases a granular appearance. When the larvae are ready to pupate, they crawl to a secluded area and seal both ends of the case with silk.

Casemaking clothes moth larvae construct cases of lint and dirt particles, giving the cases a granular appearance.

Preventing an infestation of clothes moths is much easier than eliminating an established infestation. Woolen clothing and blankets that are in constant use and routinely cleaned are rarely damaged since infestations are readily detected and eliminated. Tapestries and woolen carpets should be vacuumed routinely and inspected closely for evidence of pests. Vacuum shelves and dresser drawers before storing woolen clothing for the season. Closet floors should be vacuumed regularly, paying special attention to the area beneath baseboards.

Woolens and furs should be laundered or dry cleaned prior to storage, and placed in pest-proof containers with secure lids or tight seals. Research has shown that although webbing clothes moth larvae will feed for a short time on clean woolen goods, they most often seek out and feed on the soiled portions of these fabrics. It is recognized that vitamin B is essential to the full development of the larvae, and many of the constituents of vitamin B occur in perspiration, urine, fruit juices, milk, and meat gravy. If the larvae feed only on clean woolen goods, death from apparent starvation follows in approximately two weeks.

Do not rely on cedar oil, chips, or cedar-lined closets as an effective means of controlling or preventing wool damaging pests. Research has shown that very young larvae of clothes moths exposed to high concentrations of cedar oil vapor are killed, but older larvae, adult moths, and most carpet beetles are not affected. Cedar lumber eventually loses essential oils, and in several years the concentrations of the vapors are not high enough to provide control.

If an infestation is discovered in clothing or blankets, vacuum or brush the insects off the fabric, then launder or dry clean the article. Small carpets, tapestries, and wall hangings can be vacuumed thoroughly on both sides using the brush attachment or use the rotating action of the vacuum cleaner on rugs to dislodge the larvae and the silk deposits. It may be possible to eliminate heavy infestations in large area rugs or carpets by thorough vacuuming, but if evidence of webbing is observed on the underside of the carpet, additional efforts will be necessary. Remove any furniture, and after vacuuming the upper side of the carpet, roll it over and vacuum the underside. Thoroughly inspect the weave for any remaining larvae and webbing. Before replacing the carpet, lightly dust the underside with boric acid powder, paying special attention to protected areas which will lie beneath furniture. In heavy infestations, the carpet may need to be removed and professionally cleaned and treated.

The larvae of the casemaking clothes moth are frequently observed crawling over the floor or up the surface of a wall. To prevent further activity and eliminate the breeding site, thoroughly remove accumulated lint, hair, and dander from floors and beneath baseboards. The application of a light layer of boric acid powder or a mist of household pesticide applied to the area beneath the baseboards may be necessary to control any remaining larvae. Always read and follow label directions when using a pesticide product.

Moth balls or crystals containing naphthalene change into gases and work as fumigants. To work effectively, they must be confined in an enclosed space such as a storage container with a tight-fitting lid and little air movement. Hanging these products in a closet rarely results in the high concentrations necessary to provide protection. Concentrations high enough to kill the pests could pose a potential risk to anyone entering the closet and breathing the vapors. Clothing kept in proper storage containers and protected with these products should be aired out before use.

A pest bulletin distributed by:
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